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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,523	08/26/2003	Dong-Hoon Kim	21C-0065	4676
7590	02/10/2005		EXAMINER NEGRON, ISMAEL	
CANTOR COLBURN LLP 55 Griffin Road South Bloomfield, CT 06002			ART UNIT 2875	PAPER NUMBER

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,523

Applicant(s)

KIM ET AL.

Examiner

Ismael Negron

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 22-57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 7-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20030926.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of the invention of Group I (claims 1-21) in the reply filed on December 15, 2004 is acknowledged.

Title

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Light Guide Plate with Light Reflection Pattern.**

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "**712**" has been used to designate both "*side surface*" (page 9, line 8) and "*light incident surface*" (page 9, line 9). In addition, note the following:

- reference character "**720**", used to designate "*pattern*" (page 10, line 13) and "*light reflection pattern*" (page 10, line 17);
- reference character "**362**", used to designate "*pattern*" (page 16, line 7) and "*second light reflection pattern*" (page 16, line 15);

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- reference character “**761a**”, used to designate “*mask body*” (page 20, line 2) and “*pattern body*” (page 20, line 17);
- reference character “**763**”, used to designate “*scraper*” (page 20, line 14) and “*pattern printer*” (page 21, line 10);
- reference character “**720**”, used to designate “*light reflection pattern*” (page 18, line 23) and “*solid prism dots*” (page 22, line 4);
and
- reference character “**775f**”, used to designate “*multiple recesses*” (page 22, line 19) and “*prism pattern recesses*” (page 22, line 20).

The applicant is advised that the reference characters must be properly applied, with no single reference character being used for two different parts or for a given part and a modification of such part. See MPEP §608.01(g). Correction is required.

Applicant is further advised that this action only exemplifies the objections to the drawings, applicant’s cooperation is requested in correcting all the occurrences of the cited, or any other errors of which applicant may become aware in the specification.

3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the

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changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is indefinite as it depends on itself. For the purpose of Prior Art rejections the applicant is advised that the Examiner assumed Claim 2 to be dependent from Claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-6, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by ASHALL(U.S. Pat. 5,390,436).

ASHALL discloses a light guide plate having:

- **a light incident surface (as recited in Claim 1), as seen in Figure 1;**
- **the incident surface being for receiving light (as recited in Claim 1), inherent;**
- **a first light emission surface (as recited in Claim 1), Figure 1, reference number 12;**
- **a second light emission surface (as recited in Claim 1), Figure 1, reference number 11;**
- **the emission surfaces being for emitting light at a first light emission angle with respect to the emission surfaces (as recited in Claim 1), inherent, as light will always exit the surface at some angle;**
- **a light reflection pattern (as recited in Claim 1), Figure 1, reference number 13;**
- **the reflection pattern being formed on the first light emission surface (as recited in Claim 1), column 3, lines 15-17;**
- **the reflection pattern being for reflecting light toward the second light emission surface (as recited in Claim 1), inherent,**

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as part of the light hitting the pattern will always be reflected towards the opposite surface;

- **the reflected light from the reflection pattern exits the second light emission surface at a second light emission angle with respect to the second light emission surface (as recited in Claim 1), inherent, as light will always exit the surface at some angle;**
- **the second light emission angle being larger than the first light emission angle (as recited in Claim 2), inherent, as part of the light emitted by one surface will always be emitted at a greater angle than part of the light emitted by the other surface;**
- **the light reflection pattern including a plurality of dots (as recited in Claim 3), column 2, lines 3-6;**
- **the pattern having a prism pattern on a surface of the dots (as recited in Claim 3), inherent, as the surface of the dots will always have some roughness;**
- **the reflection pattern having different densities of the dots at different areas on the first emission surface (as recited in Claim 4), column 2, lines 20-22;**
- **the different densities being such that the closer an area is to the light incident surface, the lower the density of the dots at the area is (as recited in Claim 4), column 2, lines 20-22;**

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- **the dots have different sizes (as recited in Claim 5), column 2, lines 25 and 26;**
- **the sizes being such that the more distant a dot is from the light incident surface, the larger is the dot (as recited in Claim 5), column 2, lines 25 and 26;**
- **the dots having a substantially identical size (as recited in Claim 6), column 2, lines 23-25;**
- **the a number of the dots at a unit area closer to the incident surface is smaller than a number of the dots at a unit area farther from the incident surface (as recited in Claim 6), column 2, lines 23-25;**
- **the dots being formed integrally on the first light emission surface (as recited in Claim 19), column 2, lines 34-36;**
- **the dots being formed on a separate sheet attached to the first light emission surface (as recited in Claim 20), column 2, lines 36-39; and**
- **the light reflection pattern being made of material having a refraction index equal to that of the light guide plate (as recited in Claim 20), as evidenced in column 2, lines 34-36.**

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Relevant Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Blanchet (U.S. Pat. 4,811,507), **Taniguchi et al.** (U.S. Pat. 6,334,689), **Sasagawa et al.** (U.S. Pat. 5,454,452), **Akahane et al.** (U.S. Pat. 5,667,289), **Hira et al.** (U.S. Pat. 6,522,373), **Park et al.** (U.S. Pat. 6,843,587), **Ueda** (U.S. Pat. 6,486,931) and **Taniguchi et al.** (U.S. Pat. 6,530,671) disclose light guide plates having a plurality of prisms formed on one surface of the guide plate for redirecting light towards the opposite surface.

Allowable Subject Matter

7. Claims 7-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Applicant teaches a light guide plate having a first and second light emission surfaces, and a light reflecting pattern formed on the first emission surface. The pattern includes a plurality of dots for reflecting light from the first surface toward the second surface, such reflected light exiting the second surface at a greater angle than light emitted by the first surface. Each dot having light reflecting surfaces elongated in a

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selected direction, with adjacent light reflecting surfaces meeting each other at the elongated edges to form an angle between the adjacent reflecting surfaces.

No prior art was found teaching individually, or suggesting in combination, all of the features of the applicants' invention, specifically the dots having elongated light reflecting surfaces, with adjacent light reflecting surfaces meeting each other at the elongated edges to form an angle between the adjacent reflecting surfaces.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negron whose telephone number is (571) 272-2376. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (571) 272-2378. The facsimile machine number for the Art Group is (703) 872-9306.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications maybe obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, go to <http://pair-direct.uspto.gov>. Should you

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have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) toll-free at 866-217-9197.


Inr

February 4, 2005



JOHN ANTHONY WARD
PRIMARY EXAMINER